

WHAT IS CLAIMED IS

1. A low-pressure discharge lamp comprising a tubular glass lamp vessel on an outer surface of which a conductor layer is formed as an electrode, wherein the conductor layer is a solder dipping layer formed by solder dipping and the solder dipping layer has a main component of any one of tin, an alloy of tin and indium, or an alloy of tin and bismuth.

2. A low-pressure discharge lamp according to Claim 1, wherein the solder dipping layer contains at least one of antimony, zinc, or aluminum as an additive.

3. A low-pressure discharge lamp according to Claim 2, wherein a part of a surface of the tubular glass lamp vessel, where the solder dipping layer is formed, is blasted.

4. A low-pressure discharge lamp comprising a tubular glass lamp vessel on an outer surface of which a conductor layer is formed as an electrode, wherein the conductor layer is an ultrasonic solder dipping layer formed by ultrasonic solder dipping.

5. A low-pressure discharge lamp according to Claim 4, wherein the ultrasonic solder dipping layer has a main component of any one of tin, an alloy of tin and indium, or an alloy of tin and bismuth.

6. A low-pressure discharge lamp according to Claim 5, wherein the ultrasonic solder dipping layer contains

at least one of antimony, zinc, or aluminum as an additive.

7. A low-pressure discharge lamp according to Claim 6, wherein a part of a surface of the tubular glass lamp vessel where the ultrasonic solder dipping layer is formed is blasted.

8. A low-pressure discharge lamp according to Claim 7, wherein the ultrasonic solder dipping layer contains no lead component.

9. A method for manufacturing a low-pressure discharge lamp, comprising steps of:

preparing a fused solder bath having a main component of either one of an alloy of tin and indium or an alloy of tin and bismuth,

dipping an end of a tubular glass lamp vessel into the fused solder bath, and

forming solder dipping layers on the end of the tubular glass lamp vessel used for an external electrode.

10. A method for manufacturing a low-pressure discharge lamp according to Claim 9, further comprising a step of blasting a surface of the end of the tubular glass lamp vessel before dipping the ends of the tubular glass lamp vessel into the fused solder bath.

11. A method for manufacturing a low-pressure discharge lamp according to Claim 10, wherein the fused solder contains at least one of antimony, zinc, or aluminum as an additive.

12. A method for manufacturing a low-pressure discharge lamp according to Claim 11, wherein the fused solder contains no lead component.

13. A method for manufacturing a low-pressure discharge lamp, comprising steps of:

dipping an end of a tubular glass lamp vessel into an ultrasonic solder bath, and

forming an ultrasonic solder dipping layer on an end of the tubular glass lamp vessel used for an external electrode.

14. A method for manufacturing a low-pressure discharge lamp according to Claim 13, wherein the ultrasonic solder has a main component of any one of tin, an alloy of tin and indium or an alloy of tin and bismuth.

15. A method for manufacturing a low-pressure discharge lamp according to Claim 14, wherein the ultrasonic solder contains at least one of antimony, zinc or aluminum as an additive.

16. A method for manufacturing a low-pressure discharge lamp according to Claim 15, wherein the ultrasonic solder contains no lead component.

17. A method for manufacturing a low-pressure discharge lamp, comprising steps of:

blasting a surface of an end of a tubular glass lamp vessel, and

dipping the end of the tubular glass lamp vessel into

an ultrasonic solder bath to form an ultrasonic solder dipping layer used for external electrodes.

18. A method for manufacturing a low-pressure discharge lamp according to Claim 17, wherein the ultrasonic solder has a main component of any one of tin, an alloy of tin and indium or an alloy of tin and bismuth.

19. A method for manufacturing a low-pressure discharge lamp according to Claim 18, wherein the ultrasonic solder contains at least one of antimony, zinc or aluminum as an additive.

20. A method for manufacturing a low-pressure discharge lamp according to Claim 19, wherein the ultrasonic solder contains no lead component.